

# PCT

## REQUEST

The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty.

For receiving Office use only

International Application No.

International Filing Date

Name of receiving Office and "PCT International Application"

Applicant's or agent's file reference  
(if desired) (12 characters maximum) IWAP-0011

<b>Box No. I TITLE OF INVENTION</b>	
LIGHT-RECEIVING ELEMENT ARRAY AND OPTICAL DEMULTIPLEXER USING THE SAME	
<b>Box No. II APPLICANT</b>	
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)	
Nippon Sheet Glass Co., Ltd.	
5-11, Dosho-machi 3-chome, Chuo-ku, Osaka-shi, OSAKA 541-0045 JAPAN	
<input type="checkbox"/> This person is also inventor. Telephone No. 03-5443-9514 Facsimile No. 03-5443-9567 Teleprinter No.	
State (that is, country) of nationality:	State (that is, country) of residence:
JAPAN	JAPAN
This person is applicant for the purposes of: <input type="checkbox"/> all designated States <input checked="" type="checkbox"/> all designated States except the United States of America <input type="checkbox"/> the United States of America only <input type="checkbox"/> the States indicated in the Supplemental Box	
<b>Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)</b>	
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)	
TAGAMI Takashi	
c/o Nippon Sheet Glass Co., Ltd., 5-11, Dosho-machi 3-chome, Chuo-ku, Osaka-shi, OSAKA 541-0045 JAPAN	
This person is: <input type="checkbox"/> applicant only <input checked="" type="checkbox"/> applicant and inventor <input type="checkbox"/> inventor only (If this check-box is marked, do not fill in below.)	
State (that is, country) of nationality:	State (that is, country) of residence:
JAPAN	JAPAN
This person is applicant for the purposes of: <input type="checkbox"/> all designated States <input type="checkbox"/> all designated States except the United States of America <input checked="" type="checkbox"/> the United States of America only <input type="checkbox"/> the States indicated in the Supplemental Box	
<input type="checkbox"/> Further applicants and/or (further) inventors are indicated on a continuation sheet.	
<b>Box No. IV AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE</b>	
The person identified below is hereby/has been appointed to act on behalf of the applicant(s) before the competent International Authorities as: <input checked="" type="checkbox"/> agent <input type="checkbox"/> common representative	
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)	
8664 Patent Attorney IWASA Yoshiyuki	
IN Bldg., 10-17, Higashikanda 2-chome, Chiyoda-ku, TOKYO 101-0031 JAPAN	
Telephone No. 03-3861-9711 Facsimile No. 03-3861-9713 Teleprinter No.	
<input type="checkbox"/> Address for correspondence: Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.	

## Continuation of Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)

*If none of the following sub-boxes is used, this sheet should not be included in the request.*

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

NAKAMA Kenichi

c/o Nippon Sheet Glass Co., Ltd., 5-11,  
Doshomachi 3-chome, Chuo-ku, Osaka-shi,  
OSAKA 541-0045 JAPAN

This person is:

- ☐ applicant only  
☒ applicant and inventor  
☐ inventor only (If this check-box is marked, do not fill in below.)

State (that is, country) of nationality:

JAPAN

State (that is, country) of residence:

JAPAN

This person is applicant for the purposes of:

- ☐ all designated States ☐ all designated States except the United States of America ☒ the United States of America only ☐ the States indicated in the Supplemental Box

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

KOMABA Nobuyuki

c/o Nippon Sheet Glass Co., Ltd., 5-11,  
Doshomachi 3-chome, Chuo-ku, Osaka-shi,  
OSAKA 541-0045 JAPAN

This person is:

- ☐ applicant only  
☒ applicant and inventor  
☐ inventor only (If this check-box is marked, do not fill in below.)

State (that is, country) of nationality:

JAPAN

State (that is, country) of residence:

JAPAN

This person is applicant for the purposes of:

- ☐ all designated States ☐ all designated States except the United States of America ☒ the United States of America only ☐ the States indicated in the Supplemental Box

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

ARIMA Yasunori

c/o Nippon Sheet Glass Co., Ltd., 5-11,  
Doshomachi 3-chome, Chuo-ku, Osaka-shi,  
OSAKA 541-0045 JAPAN

This person is:

- ☐ applicant only  
☒ applicant and inventor  
☐ inventor only (If this check-box is marked, do not fill in below.)

State (that is, country) of nationality:

JAPAN

State (that is, country) of residence:

JAPAN

This person is applicant for the purposes of:

- ☐ all designated States ☐ all designated States except the United States of America ☒ the United States of America only ☐ the States indicated in the Supplemental Box

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

KUSUDA Yukihiisa

c/o Nippon Sheet Glass Co., Ltd., 5-11,  
Doshomachi 3-chome, Chuo-ku, Osaka-shi,  
OSAKA 541-0045 JAPAN

This person is:

- ☐ applicant only  
☒ applicant and inventor  
☐ inventor only (If this check-box is marked, do not fill in below.)

State (that is, country) of nationality:

JAPAN

State (that is, country) of residence:

JAPAN

This person is applicant for the purposes of:

- ☐ all designated States ☐ all designated States except the United States of America ☒ the United States of America only ☐ the States indicated in the Supplemental Box

☐ Further applicants and/or (further) inventors are indicated on another continuation sheet.

**Box No.V DESIGNATION OF STATES**

The following designations are hereby made under Rule 4.9(a) (mark the applicable check-boxes; at least one must be made):

**Regional Patent**

- ☐ **AP** ARIPO Patent: GH Ghana, GM Gambia, KE Kenya, LS Lesotho, MW Malawi, MZ Mozambique, SD Sudan, SL Sierra Leone, SZ Swaziland, TZ United Republic of Tanzania, UG Uganda, ZW Zimbabwe, and any other State which is a Contracting State of the Harare Protocol and of the PCT
- ☐ **EA** Eurasian Patent: AM Armenia, AZ Azerbaijan, BY Belarus, KG Kyrgyzstan, KZ Kazakhstan, MD Republic of Moldova, RU Russian Federation, TJ Tajikistan, TM Turkmenistan, and any other State which is a Contracting State of the Eurasian Patent Convention and of the PCT
- ☒ **EP** European Patent: AT Austria, BE Belgium, CH and LI Switzerland and Liechtenstein, CY Cyprus, DE Germany, DK Denmark, ES Spain, FI Finland, FR France, GB United Kingdom, GR Greece, IE Ireland, IT Italy, LU Luxembourg, MC Monaco, NL Netherlands, PT Portugal, SE Sweden, and any other State which is a Contracting State of the European Patent Convention and of the PCT
- ☐ **OA** OAPI Patent: BF Burkina Faso, BJ Benin, CF Central African Republic, CG Congo, CI Côte d'Ivoire, CM Cameroon, GA Gabon, GN Guinea, GW Guinea-Bissau, ML Mali, MR Mauritania, NE Niger, SN Senegal, TD Chad, TG Togo, and any other State which is a member State of OAPI and a Contracting State of the PCT (if other of protection or treatment desired, specify on dotted line)

**National Patent (if other kind of protection or treatment desired, specify on dotted line):**

- |   |   |
|---|---|
| <input type="checkbox"/> AE United Arab Emirates                  | <input type="checkbox"/> LC Saint Lucia                               |
| <input type="checkbox"/> AG Antigua and Barbuda                   | <input type="checkbox"/> LK Sri Lanka                                 |
| <input type="checkbox"/> AL Albania                               | <input type="checkbox"/> LR Liberia                                   |
| <input type="checkbox"/> AM Armenia                               | <input type="checkbox"/> LS Lesotho                                   |
| <input type="checkbox"/> AT Austria                               | <input type="checkbox"/> LT Lithuania                                 |
| <input type="checkbox"/> AU Australia                             | <input type="checkbox"/> LU Luxembourg                                |
| <input type="checkbox"/> AZ Azerbaijan                            | <input type="checkbox"/> LV Latvia                                    |
| <input type="checkbox"/> BA Bosnia and Herzegovina                | <input type="checkbox"/> MA Morocco                                   |
| <input type="checkbox"/> BB Barbados                              | <input type="checkbox"/> MD Republic of Moldova                       |
| <input type="checkbox"/> BG Bulgaria                              | <input type="checkbox"/> MG Madagascar                                |
| <input type="checkbox"/> BR Brazil                                | <input type="checkbox"/> MK The former Yugoslav Republic of Macedonia |
| <input type="checkbox"/> BY Belarus                               | <input type="checkbox"/> MN Mongolia                                  |
| <input type="checkbox"/> BZ Belize                                | <input type="checkbox"/> MW Malawi                                    |
| <input checked="" type="checkbox"/> CA Canada                     | <input type="checkbox"/> MX Mexico                                    |
| <input type="checkbox"/> CH and LI Switzerland and Liechtenstein  | <input type="checkbox"/> MZ Mozambique                                |
| <input checked="" type="checkbox"/> CN China                      | <input type="checkbox"/> NO Norway                                    |
| <input type="checkbox"/> CR Costa Rica                            | <input type="checkbox"/> NZ New Zealand                               |
| <input type="checkbox"/> CU Cuba                                  | <input type="checkbox"/> PL Poland                                    |
| <input type="checkbox"/> CZ Czech Republic                        | <input type="checkbox"/> PT Portugal                                  |
| <input type="checkbox"/> DE Germany                               | <input type="checkbox"/> RO Romania                                   |
| <input type="checkbox"/> DK Denmark                               | <input type="checkbox"/> RU Russian Federation                        |
| <input type="checkbox"/> DM Dominica                              | <input type="checkbox"/> SD Sudan                                     |
| <input type="checkbox"/> DZ Algeria                               | <input type="checkbox"/> SE Sweden                                    |
| <input type="checkbox"/> EE Estonia                               | <input type="checkbox"/> SG Singapore                                 |
| <input type="checkbox"/> ES Spain                                 | <input type="checkbox"/> SI Slovenia                                  |
| <input type="checkbox"/> FI Finland                               | <input type="checkbox"/> SK Slovakia                                  |
| <input type="checkbox"/> GB United Kingdom                        | <input type="checkbox"/> SL Sierra Leone                              |
| <input type="checkbox"/> GD Grenada                               | <input type="checkbox"/> TJ Tajikistan                                |
| <input type="checkbox"/> GE Georgia                               | <input type="checkbox"/> TM Turkmenistan                              |
| <input type="checkbox"/> GH Ghana                                 | <input type="checkbox"/> TR Turkey                                    |
| <input type="checkbox"/> GM Gambia                                | <input type="checkbox"/> TT Trinidad and Tobago                       |
| <input type="checkbox"/> HR Croatia                               | <input type="checkbox"/> TZ United Republic of Tanzania               |
| <input type="checkbox"/> HU Hungary                               | <input type="checkbox"/> UA Ukraine                                   |
| <input type="checkbox"/> ID Indonesia                             | <input type="checkbox"/> UG Uganda                                    |
| <input type="checkbox"/> IL Israel                                | <input checked="" type="checkbox"/> US United States of America       |
| <input type="checkbox"/> IN India                                 | <input type="checkbox"/> UZ Uzbekistan                                |
| <input type="checkbox"/> IS Iceland                               | <input type="checkbox"/> VN Viet Nam                                  |
| <input type="checkbox"/> JP Japan                                 | <input type="checkbox"/> YU Yugoslavia                                |
| <input type="checkbox"/> KE Kenya                                 | <input type="checkbox"/> ZA South Africa                              |
| <input type="checkbox"/> KG Kyrgyzstan                            | <input type="checkbox"/> ZW Zimbabwe                                  |
| <input type="checkbox"/> KP Democratic People's Republic of Korea |   |
| <input type="checkbox"/> KR Republic of Korea                     |   |
| <input type="checkbox"/> KZ Kazakhstan                            |   |

Check-box reserved for designating States which have become party to the PCT after issuance of this sheet:

**Precautionary Designation Statement:** In addition to the designations made above, the applicant also makes under Rule 4.9(b) all other designations which would be permitted under the PCT except any designation(s) indicated in the Supplemental Box as being excluded from the scope of this statement. The applicant declares that those additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 15 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit. (Confirmation (including fees) must reach the receiving Office within the 15-month time limit.)

<b>Box No. VI PRIORITY CLAIM</b>		<input type="checkbox"/> Further priority claims are indicated in the Supplemental Box.		
Filing date of earlier application (day/month/year)	Number of earlier application	Where earlier application is:		
		national application: country	regional application: regional Office	international application: receiving Office
item (1) 08.10.99	11/287,764	JAPAN		
item (2) 12.11.99	11/322,004	JAPAN		
item (3) 07.01.00	2000/1,928	JAPAN		
<input checked="" type="checkbox"/> The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) (only if the earlier application was filed with the Office which for the purposes of the present international application is the receiving Office) identified above as item(s): (1) (2) (3)				
<small>* Where the earlier application is an ARIPO application, it is mandatory to indicate in the Supplemental Box at least one country party to the Paris Convention for the Protection of Industrial Property for which that earlier application was filed (Rule 4.10(b)(ii)). See Supplemental Box.</small>				
<b>Box No. VII INTERNATIONAL SEARCHING AUTHORITY</b>				
<b>Choice of International Searching Authority (ISA)</b> <small>(if two or more International Searching Authorities are competent to carry out the international search, indicate the Authority chosen; the two-letter code may be used):</small>		<b>Request to use results of earlier search; reference to that search</b> (if an earlier search has been carried out by or requested from the International Searching Authority):		
ISA/ JP		Date (day/month/year)	Number	Country (or regional Office)
<b>Box No. VIII CHECK LIST; LANGUAGE OF FILING</b>				
This international application contains the following number of sheets: request : 4 description (excluding sequence listing part) : 15 claims : 4 abstract : 1 drawings : 15 sequence listing part of description : Total number of sheets : 39		This international application is accompanied by the item(s) marked below: 1. <input type="checkbox"/> fee calculation sheet 2. <input type="checkbox"/> separate signed power of attorney 3. <input type="checkbox"/> copy of general power of attorney; reference number, if any: 4. <input type="checkbox"/> statement explaining lack of signature 5. <input type="checkbox"/> priority document(s) identified in Box No. VI as item(s): 6. <input type="checkbox"/> translation of international application into (language): 7. <input type="checkbox"/> separate indications concerning deposited microorganism or other biological material 8. <input type="checkbox"/> nucleotide and/or amino acid sequence listing in computer readable form 9. <input type="checkbox"/> other (specify):		
Figure of the drawings which should accompany the abstract: Fig. 7		Language of filing of the international application: JAPANESE		
<b>Box No. IX SIGNATURE OF APPLICANT OR AGENT</b>				
<small>Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the request).</small>				
IWASA Yoshiyuki				

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1. Date of actual receipt of the purported international application: 3. Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application: 4. Date of timely receipt of the required corrections under PCT Article 11(2): 5. International Searching Authority (if two or more are competent): ISA /	2. Drawings: <input type="checkbox"/> received: <input type="checkbox"/> not received: 6. <input type="checkbox"/> Transmittal of search copy delayed until search fee is paid.

For International Bureau use only
Date of receipt of the record copy by the International Bureau:

## PCT

## 国際調査報告

(法8条、法施行規則第40、41条)  
(PCT18条、PCT規則43、44)

09/857,634

出願人又は代理人 の書類記号 I W A P - 0 0 1 1	今後の手続きについては、国際調査報告の送付通知様式(PCT/ISA/220)及び下記5を参照すること。	
国際出願番号 PCT/J P 0 0 / 0 6 9 3 8	国際出願日 (日.月.年) 05.10.00	優先日 (日.月.年) 08.10.99
出願人(氏名又は名称) 日本板硝子株式会社		

国際調査機関が作成したこの国際調査報告を法施行規則第41条(PCT18条)の規定に従い出願人に送付する。  
この写しは国際事務局にも送付される。

この国際調査報告は、全部で 3 ページである。

☐ この調査報告に引用された先行技術文献の写しも添付されている。

## 1. 国際調査報告の基礎

a. 言語は、下記に示す場合を除くほか、この国際出願がされたものに基づき国際調査を行った。

☐ この国際調査機関に提出された国際出願の翻訳文に基づき国際調査を行った。

b. この国際出願は、ヌクレオチド又はアミノ酸配列を含んでおり、次の配列表に基づき国際調査を行った。

☐ この国際出願に含まれる書面による配列表

☐ この国際出願と共に提出されたフレキシブルディスクによる配列表

☐ 出願後に、この国際調査機関に提出された書面による配列表

☐ 出願後に、この国際調査機関に提出されたフレキシブルディスクによる配列表

☐ 出願後に提出した書面による配列表が出願時における国際出願の開示の範囲を超える事項を含まない旨の陳述書の提出があった。

☐ 書面による配列表に記載した配列とフレキシブルディスクによる配列表に記載した配列が同一である旨の陳述書の提出があった。

2. ☐ 請求の範囲の一部の調査ができない(第I欄参照)。

3. ☐ 発明の単一性が欠如している(第II欄参照)。

4. 発明の名称は ☒ 出願人が提出したものを承認する。

☐ 次に示すように国際調査機関が作成した。

5. 要約は ☒ 出願人が提出したものを承認する。

☐ 第III欄に示されているように、法施行規則第47条(PCT規則38.2(b))の規定により国際調査機関が作成した。出願人は、この国際調査報告の発送の日から1カ月以内にこの国際調査機関に意見を提出することができる。

6. 要約書とともに公表される図は、  
第 7 図とする。 ☒ 出願人が示したとおりである。

☐ なし

☐ 出願人は図を示さなかった。

☐ 本図は発明の特徴を一層よく表している。

A. 発明の属する分野の分類 (国際特許分類 (IPC)) IPC C1. 7 G01J3/36		
B. 調査を行った分野 調査を行った最小限資料 (国際特許分類 (IPC)) IPC C1. 7 G01J3/00-3/51, G01N21/27-21/39 H01L27/14		
最小限資料以外の資料で調査を行った分野に含まれるもの 日本国実用新案公報1922-1996年 日本国公開実用新案公報1971-2000年 日本国登録実用新案公報1994-2000年 日本国実用新案登録公報1996-2000年		
国際調査で使用した電子データベース (データベースの名称、調査に使用した用語) ECLA WPI/L		
C. 関連すると認められる文献		
引用文献の カテゴリー*	引用文献名 及び一部の箇所が関連するときは、その関連する箇所の表示	関連する 請求の範囲の番号
A	JP, 5-87635, A(キャノン株式会社)06.4月.1993(06.04.93) 全文 ファミリーなし	1-16
A	GB, 862212, A(REGIE NATIONALE DES USINES REN)08.6月.1956(08.0 6.56) 全文 ファミリー無し	1-16
A	US, 3535537, A(US NAVY)09.4月.1968(09.04.68) 全文 ファミリー 無し	1-16
<input checked="" type="checkbox"/> C欄の続きにも文献が列挙されている。 <input type="checkbox"/> パテントファミリーに関する別紙を参照。		
* 引用文献のカテゴリー 「A」 特に関連のある文献ではなく、一般的技術水準を示すもの 「E」 国際出願日前の出願または特許であるが、国際出願日以後に公表されたもの 「L」 優先権主張に疑義を提起する文献又は他の文献の発行日若しくは他の特別な理由を確立するために引用する文献 (理由を付す) 「O」 口頭による開示、使用、展示等に言及する文献 「P」 国際出願日前で、かつ優先権の主張の基礎となる出願日の後に公表された文献 「T」 国際出願日又は優先日後に公表された文献であって出願と矛盾するものではなく、発明の原理又は理論の理解のために引用するもの 「X」 特に関連のある文献であって、当該文献のみで発明の新規性又は進歩性がないと考えられるもの 「Y」 特に関連のある文献であって、当該文献と他の1以上の文献との、当業者にとって自明である組合せによって進歩性がないと考えられるもの 「&」 同一パテントファミリー文献		
国際調査を完了した日 12.12.00	国際調査報告の発送日 26.12.00	
国際調査機関の名称及びあて先 日本国特許庁 (ISA/J P) 郵便番号100-8915 東京都千代田区霞が関三丁目4番3号	特許庁審査官 (権限のある職員) 樋口宗彦 電話番号 03-3581-1101 内線 3292	2W 9118

C (続き) . 関連すると認められる文献		
引用文献の カテゴリー*	引用文献名 及び一部の箇所が関連するときは、その関連する箇所の表示	関連する 請求の範囲の番号
A	JP, 2000-213987, A (横河電機株式会社) 4. 8月. 2000 (04. 08. 00) 全文 ファミリー無し	1-16
A	JP, 9-210783, A (横河電機株式会社) 15. 8月. 1997 (15. 08. 97) 全文 ファミリー無し	1-16

# PATENT COOPERATION TREATY

**PCT**

## NOTIFICATION OF THE RECORDING OF A CHANGE

(PCT Rule 92bis.1 and  
Administrative Instructions, Section 422)

From the INTERNATIONAL BUREAU

To:

IWASA, Yoshiyuki  
IN Building  
10-17, Higashikanda 2-chome  
Chiyoda-ku  
Tokyo 101-0031  
JAPON

**RECEIVED**  
NOV 23 2001  
Technology Center 2600

<b>Date of mailing (day/month/year)</b> 18 juin 2001 (18.06.01)	<b>Applicant's or agent's file reference</b> IWAP-0011
<b>International application No.</b> PCT/JP00/06938	<b>International filing date (day/month/year)</b> 05 octobre 2000 (05.10.00)

1. The following indications appeared on record concerning:

☒ the applicant
 ☒ the inventor
 ☐ the agent
 ☐ the common representative

Name and Address

ARIMA, Yasutomo  
Nippon Sheet Glass Co., Ltd.  
5-11, Dosho-machi 3-chome  
Chuo-ku, Osaka-shi  
Osaka 541-0045  
Japan

State of Nationality

JP

State of Residence

JP

Telephone No.

Facsimile No.

Teleprinter No.

2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

☐ the person
 ☒ the name
 ☐ the address
 ☐ the nationality
 ☐ the residence

Name and Address

ARIMA, Yasunori  
Nippon Sheet Glass Co., Ltd.  
5-11, Dosho-machi 3-chome  
Chuo-ku, Osaka-shi  
Osaka 541-0045  
Japan

State of Nationality

JP

State of Residence

JP

Telephone No.

Facsimile No.

Teleprinter No.

3. Further observations, if necessary:

4. A copy of this notification has been sent to:

☒ the receiving Office
 ☒ the designated Offices concerned  
☐ the International Searching Authority
 ☐ the elected Offices concerned  
☐ the International Preliminary Examining Authority
 ☐ other:

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Authorized officer

Shinji IGARASHI

Facsimile No.: (41-22) 740.14.35

Telephone No.: (41-22) 338.83.38